

CORALANTHURA AND *SAURANTHURA*, TWO NEW
GENERA OF ANTHURIDEANS FROM
NORTHEASTERN AUSTRALIA
(CRUSTACEA: ISOPODA: ANTHURIDAE)

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Abstract.—Two new anthurid genera, *Coralanthura* for *C. endeavourae* n. sp. and *C. ardea* n. sp., and *Sauranthura* for *S. goldmanorum* n. sp., are described from the Great Barrier Reef and the Coral Sea. *Coralanthura* is characterized by a 7-articulate maxilliped, non-operculiform pleopods, and triangular carpi on the posterior pereopods. *Sauranthura* lacks the seventh pereopod, has a 3-articulate maxilliped, and triangular carpi on the posterior pereopods.

The anthuridean fauna of temperate southeastern Australia has only recently been the subject of intensive study and has been found to contain numerous new species and genera (Poore, 1975, 1978). It is not surprising, therefore, that the fauna of tropical Australia is largely unknown as is the case for the tropical Pacific (Kensley, 1979). This contribution reports on two new anthurid genera, one represented by two species. The material comes from small collections made on reefs in the Coral Sea and on the Great Barrier Reef. Material is deposited in the National Museum of Victoria, Melbourne (NMV), the Queensland Museum, Brisbane (QM), and the United States National Museum of Natural History (USNM).

Family Anthuridae
Coralanthura, new genus

Diagnosis.—Eyes present. Antenna 1 flagellum of 3-5 articles. Antenna 2 flagellum of 6-11 articles. Mandibular palp of 3 articles. Maxilliped of 7 articles, long endite present. Pereopod 1 subchelate, propodus expanded, larger than pereopods 2 and 3. Pereopods 4-7 with triangular carpi having short free anterior margins. Pleopod 1 exopod barely operculiform, not indurate. Pleonites 1-5 free, short, subequal in length; 6 fused with telson. Telson lacking statocysts.

Etymology.—The generic name derives from 'coral' for the Coral Sea, where it was first taken, plus the frequently used name 'anthura.'

Type-species.—*Coralanthura endeavourae*, new species.

Remarks.—Only two other genera of anthurids share with *Coralanthura* a maxilliped of 7 articles, viz. *Neohyssura* Amar, and *Ocsanthura* Kensley.

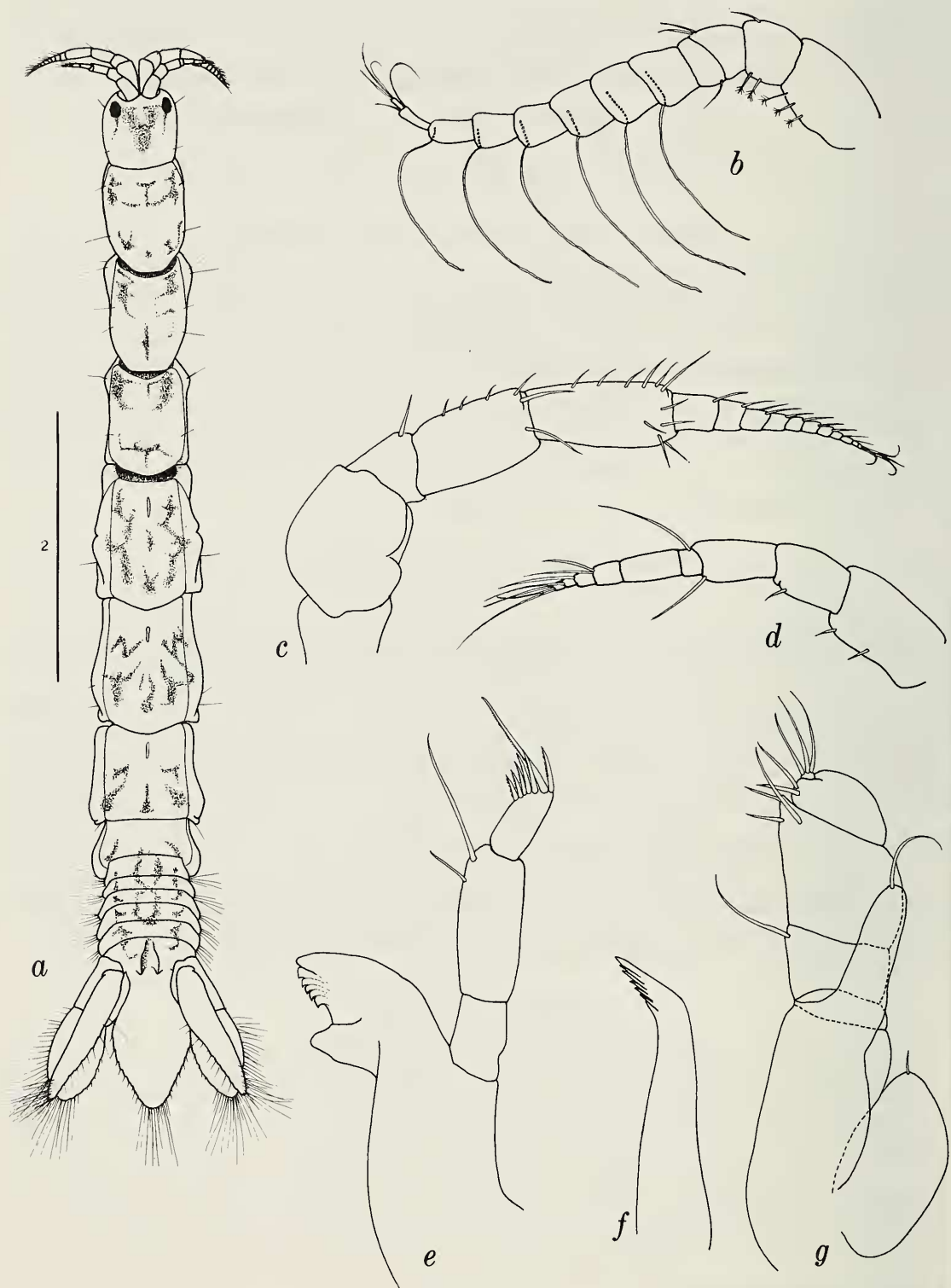


Fig. 1. *Coralanthura endeavourae*: a, Holotype in dorsal view (scale in mm); b, Antenna 1 ♂; c, Antenna 2; d, Antenna 1 ♀; e, Mandible; f, Maxilla; g, Maxilliped.

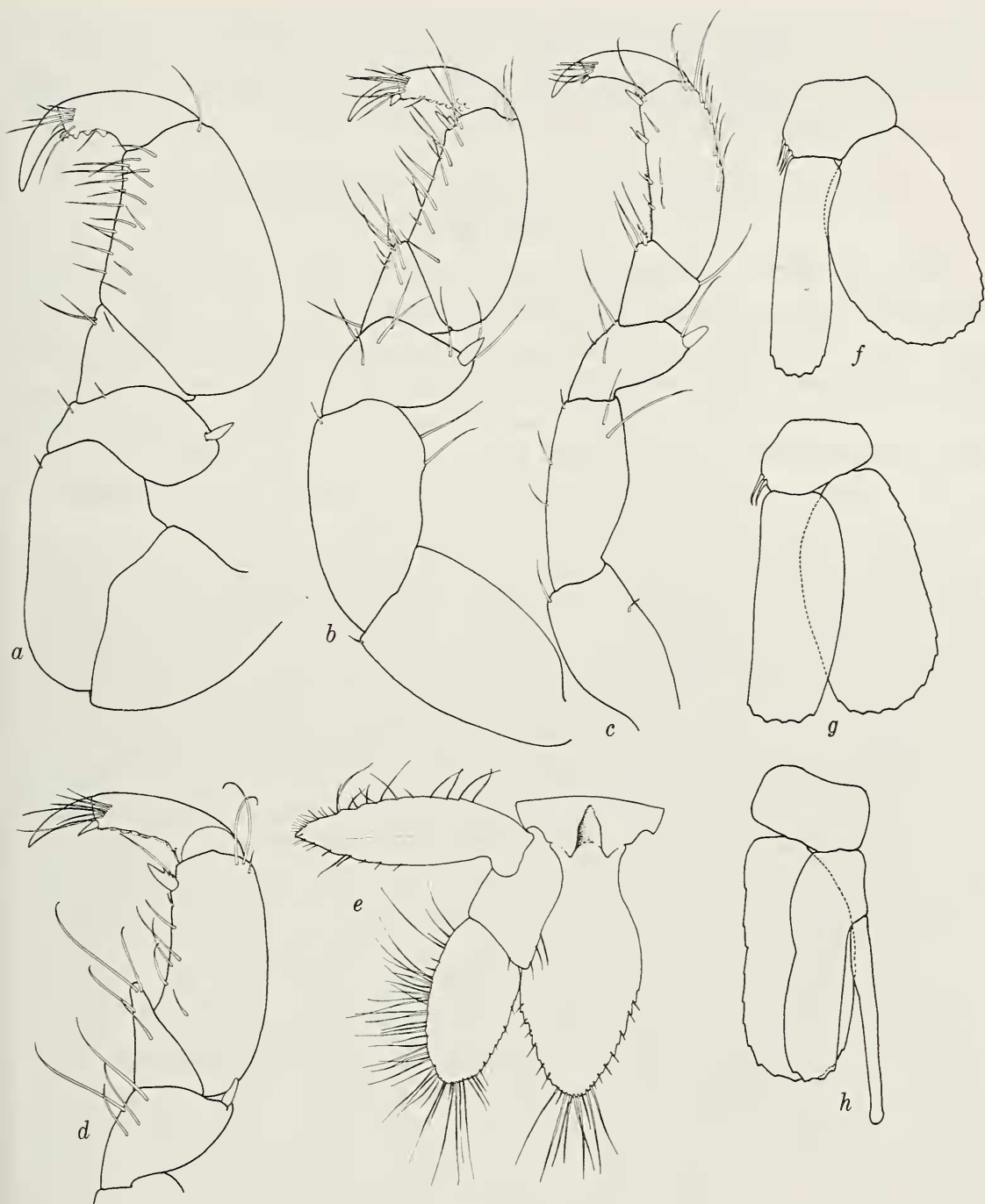


Fig. 2. *Coralanthura endeavourae*: a, Pereopod 1 ♀; b, Pereopod 2; c, Pereopod 7; d, Pereopod 1 ♂; e, Fused pleonite 6, telson, and left uropod; f, Pleopod 1; g, Pleopod 2 ♀; h, Pleopod 2 ♂.

Neohyssura is also similar to *Coralanthura* in having pleonites 1–5 free, and pleonite 6 fused with the telson, but differs in being blind, and in having a poorly developed maxillipedal endite, poor setation on the mandibular palp, well developed, i.e. expanded pereopods 2 and 3, and a broad prop-

odus on the posterior pereopods. The blind genus *Ocsanthura* has relatively more elongate pleonites, a quadrate carpus of the posterior pereopods, a less strongly developed maxillipedal endite, a slender acute mandibular molar and broad lamina dentata, and pleonite 6 free.

Coralanthura endeavourae, new species

Figs. 1, 2

Description.—♀. Integument not indurate; with dorsal pigmentation patches on head, pereon, and pleon. Body proportions: $C < 1 = 2 = 3 < 4 > 5 > 6 > 7$. Head with blunt rostrum as long as rounded anterolateral lobes; eyes well pigmented. Pereonites 4–6 each with shallow, elongate middorsal pit. Pleonites 1–5 free, short, subequal, pleonite 6 fused to telson, with strong middorsal excavation in posterior margin. Telson proximally narrow, widest at midlength, tapering evenly to rounded apex, margins unevenly serrate, with short lateral setae, and elongate distal setae.

Antenna 1 flagellum of 5 articles, equal in length to second and third articles of peduncle together. Antenna 2 peduncle with articles 4 and 5 relatively elongate; flagellum of 11 articles, shorter than 2 proximal peduncle articles. Mandibular palp of 3 articles, second as long as first and third together; article 3 with comb of 7 fringed spines, penultimate spine longest; incisor with single cusp; lamina dentata with 5 serrations; molar bluntly rounded. Maxilliped of 7 articles, third article short; seventh minute, subterminal; narrow distally rounded endite reaching to middle of maxillipedal article 5. Pereopod 1 subchelate, stout; merus with blade-like spine on anterior margin; propodus inflated, as deep as long, with straight setose cutting edge; dactylus strongly hooked, shorter than palm, unguis almost half length of dactylus. Pereopods 2 and 3 similar, less robust than first, propodi not inflated, with blade-like anterior spine; propodus stoutly cylindrical, with setae and distal spine on palm; unguis one-third length of curved dactylus. Pereopods 4–7 similar, merus with blade-shaped anterior spine; carpus triangular, but with short free anterior margin; propodus with 4 evenly-spaced spines on posterior margin; dactylus with short unguis. Pleopods subequal in length and form. Pleopod 1 non-operculiform, endopod as long as exopod, but less than half width, both rami with distal plumose setae. Uropodal peduncle short, half as long as telson; exopod lanceolate-acute, about one-third as wide as long; endopod reaching to end of telson, subovate, both rami with setose margins.

♂. Head with large swollen eyes; antenna 1 flagellum of 6 articles bearing dense whorls of aesthetascs. Pereopod 1 palm setose; pereopod 2 as in female; pereopod 3 with distally produced carpus. Pleopod 2 with club-shaped stylet little longer than rami.

Etymology.—The species is named for H.M.S. *Endeavour*, the ship in which Captain James Cook visited Northern Australia in 1770.

Material.—Holotype: NMV J821 and J822 (slide), ovigerous ♀, TL 7.4 mm: Coral Sea, cay north of Long Island, Chesterfield Reefs, 19°48'S, 158°17'E; 10 m from reef edge; coll. N. L. Bruce, 10 May 1979.

Paratypes: NMV J823, 1 non-ovigerous ♀ 6.0 mm, 1 manca 3.0 mm, 1 ♂ 4.4 mm; QM W8096, 1 ♂ 4.5 mm; QM W8106, 1 non-ovigerous ♀ 7.3 mm, 1 manca 3.0 mm; from type locality. NMV J824 and J825 (slide), 1 ♂ 4.6 mm; USNM 181712, 3 non-ovigerous, ♀, 4.2 mm, 4.9 mm, 5.8 mm; Long Island, Chesterfield Reefs, seaward edge of reef, 15 m; coll. N. L. Bruce, 6 May 1979. NMV J826, head and pleon only; Queensland, Lizard Island, 14°40'S, 145°28'E, Great Barrier Reef, outer barrier reef near platform, 1 m, coral rubble with red encrusting algae; coll. B. Kensley, 29 May 1980.

Coralanthura ardea, new species

Figs. 3, 4

Description.—♀. Integument not indurate, with small dorsal spots of pigment on head, posterior margin of pereonites 2–6, and pleonite 6. Body proportions: $C < 1 > 2 > 3 < 4 = 5 < 6 > 7$. Head with broad rostrum as long as rounded anterolateral lobes; eyes small, well pigmented. Pereonites 4–6 with very shallow dorsal pits. Pleonites 1–5 free, pleonite 6 fused with telson, with strong middorsal excavation in posterior margin. Telson narrow proximally, widest at midlength, tapering to rounded apex; distal margins unevenly serrate; short setae laterally, elongate setae distally.

Antenna 1 peduncle with second and third articles subequal in length, flagellum of 3 articles, equal in length to last article of peduncle. Antenna 2 peduncle with fifth article twice length of fourth, flagellum of 6 articles, shorter than last peduncle article. Mandibular palp of 3 articles, second as long as first and third together; article 3 with comb of 7 spines, distalmost longest; incisor with 3 cusps; lamina dentata with 5 serrations; molar obsolete. Maxilliped of 7 articles, third short, seventh minute, terminal; narrow apically acute endite reaching almost to end of maxillipedal article 5. Pereopod 1 subchelate, stout; ischium and basis with deep flanges on anterior margins; propodus almost as deep as long, inflated, palm with 2 proximal teeth plus setae; dactylus curved, as long as palm, unguis one-quarter length of dactylus. Pereopod 2 less well developed than first; ischium and basis with flanges on anterior margin; propodus with large proximal and smaller distal tooth on palm; unguis one-third length of curved dactylus. Pereopod 3 similar to 2, but toothed palm of propodus shorter. Pereopods 4–7 similar; carpi triangular, with free anterior margin considerably shorter than posterior margin; propodus with row of about 9 spines along posterior margin; dactylus with short unguis. Pleopod 1 approaching operculiform condition, not indurate; exopod almost twice length of pleopod 2, distally setose; endopod small, triangular, less than half length of exopod, with 2 terminal

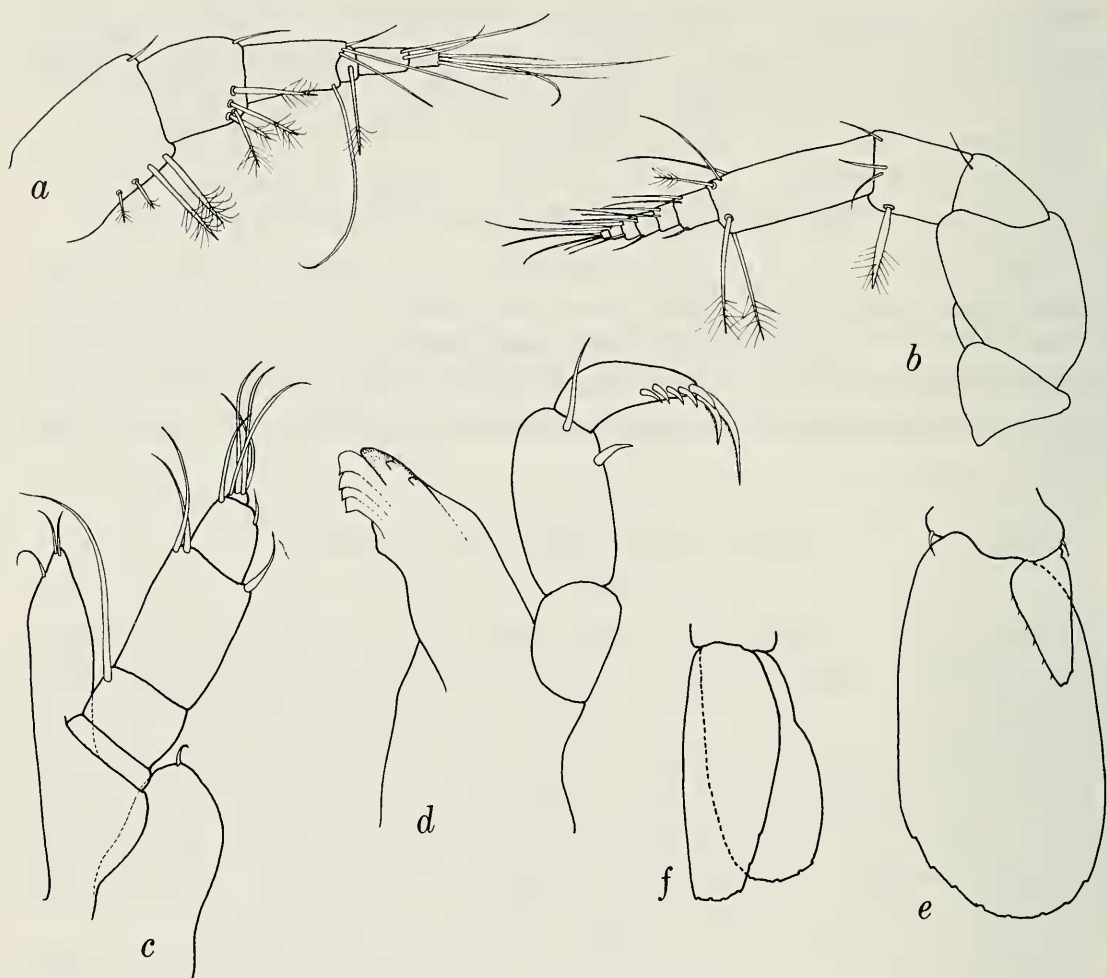


Fig. 3. *Coralanthura ardea*: a, Antenna 1; b, Antenna 2; c, Maxilliped; d, Mandible; e, Pleopod 1; f, Pleopod 2.

setae. Pleopod 2 with subequal rami, distally setose. Uropodal peduncle short, half length of telson; exopod broadly lanceolate, about twice as long as greatest width; endopod reaching to end of telson, widest basally, tapering to rounded apex; both rami with setose margins.

Etymology.—The species, taken from Heron Island, is named for *Ardea*, a genus of heron.

Material.—Holotype: NMV J827, ovigerous ♀, TL 4.8 mm; Queensland, Heron Island, Great Barrier Reef 23°27'S, 151°55'E; reef flat, coll. N. L. Bruce, 15 Jan. 1979. Paratypes: NMV J828, 2 non-ovigerous ♀, 3.2 mm, 3.9 mm; NMV J829, J830 (slide), 1 ♀ 4.3 mm, QM W8671, 3 non-ovigerous ♀, 2.0 mm, 3.5 mm, 3.6 mm; USNM 181713, 2 non-ovigerous ♀, 3.5 mm, 4.3 mm; all from type-locality.

Remarks.—*C. endeavourae* and *C. ardea* are placed in the same genus as they show a similar structure in the pleonal condition, maxilliped, mandible, and pereopods. The structure of pleopod 1 (along with the number of

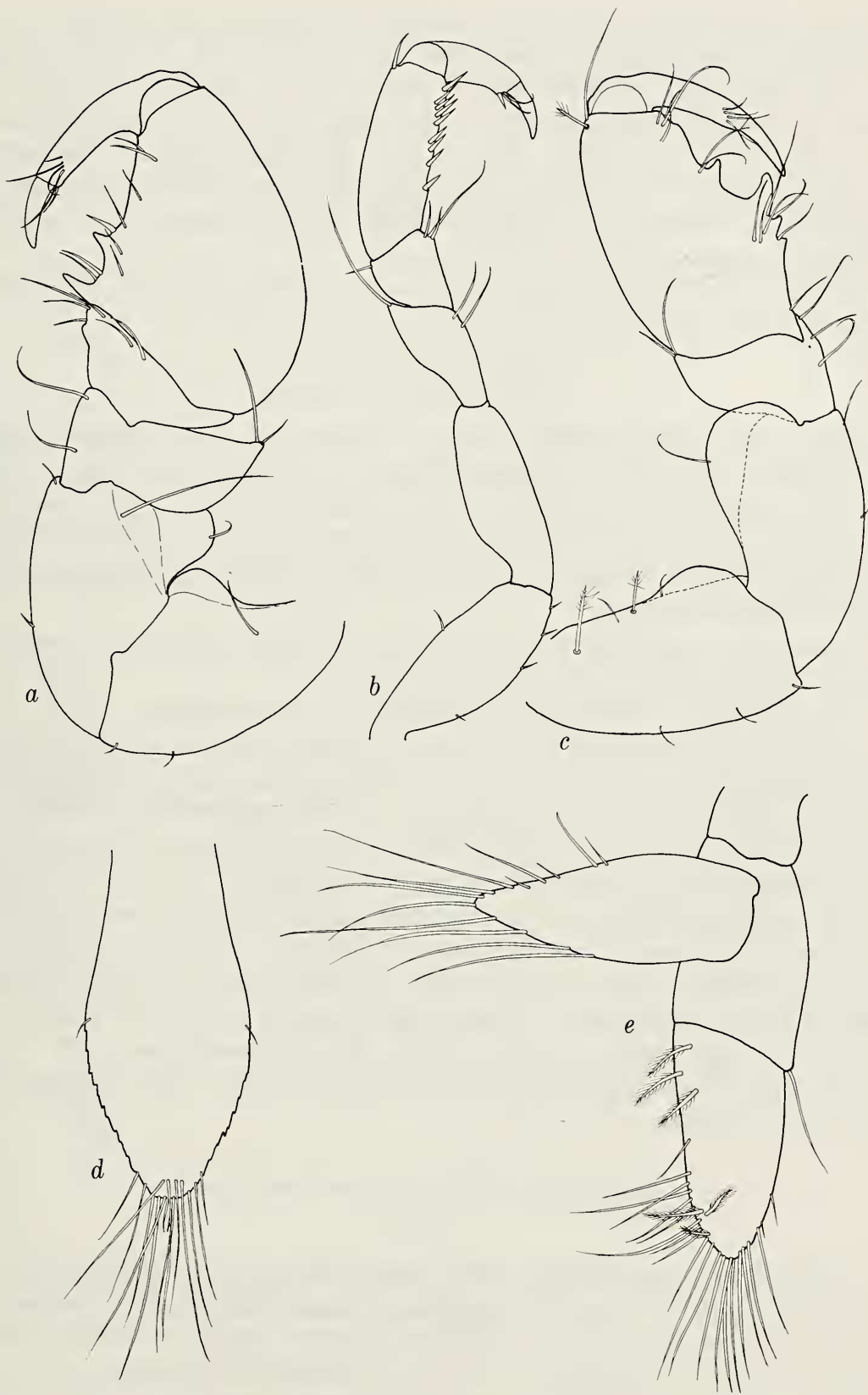


Fig. 4. *Coralanthura ardea*; a, Pereopod 1; b, Pereopod 7; c, Pereopod 2; d, Telson; e, Uropod.

articles in the first and second antennae, propodus of pereopod 1, and maxillipedal palp) serve to separate the species, with *C. ardea* showing a more advanced condition than *C. endeavourae*. In the latter, the endopod of pleopod 1 is as long as, but only about half the width of the exopod, which is broader than in the following subequal pleopods. In *C. ardea*, however, pleopod 1 is longer than the following pleopods, the endopod is reduced to a short triangular ramus, while the broad exopod is becoming operculiform.

C. ardea is known only from the type-locality at 23.5°S, considerably further south than *C. endeavourae*.

Sauranthura, new genus

Diagnosis.—Eyes present. Antenna 1 flagellum of 1 or 2 articles. Antenna 2 flagellum of 2 articles. Mandibular palp of 3 articles. Maxilliped of 3 articles, endite present. Pereopod 1 subchelate, propodus expanded, larger than pereopods 2 and 3. Pereopods 4–6 with carpus triangular. Pereopod 7 lacking. Pleonites 1–5 fused, 6 free. Pleopod 1 exopod operculiform. Telson with 2 basal statocysts.

Etymology.—The generic name is derived from the Greek “sauros”—a lizard, the type locality being Lizard Island.

Type-species.—*Sauranthura goldmanorum*, new species.

Remarks.—Among the Anthuridae two genera lack pereopods on the seventh pereonite, viz. *Hyssura* Norman and Stebbing, 1886, and *Exallanthura* Kensley, 1980. The former possesses a 5- or 6-segmented maxilliped, pleonites 1–5 free, pleonite 6 fused with the telson, and the exopod of pleopod 1 non-operculiform. The latter genus, with pleonites 1–5 fused, an operculiform exopod of pleopod 1, and a 3-segmented maxilliped, resembles *Sauranthura* more closely, but the single-segmented mandibular palp immediately separates the Indian Ocean genus from the present material. In general body form, maxillipedal, antennal, uropodal, and telsonic structure, *Sauranthura* is very similar to *Pendanthura* Menzies and Glynn, 1967, but the single-segmented mandibular palp of this latter genus again distinguishes it from *Sauranthura*.

Sauranthura goldmanorum, new species

Fig. 5

Description.—Integument thin, non-indurate. Body proportions: $C > 1 > 2 = 3 = 4 = 5 > 6 > 7$; pereonite 7 about half length of pereonite 6. Head with rounded rostrum extending beyond rounded anterolateral lobes; band of red-brown pigment between well-pigmented dorsolateral eyes. Pleonites 1–5 fused, with lateral slits indicating segmentation; pleonite 6 free,

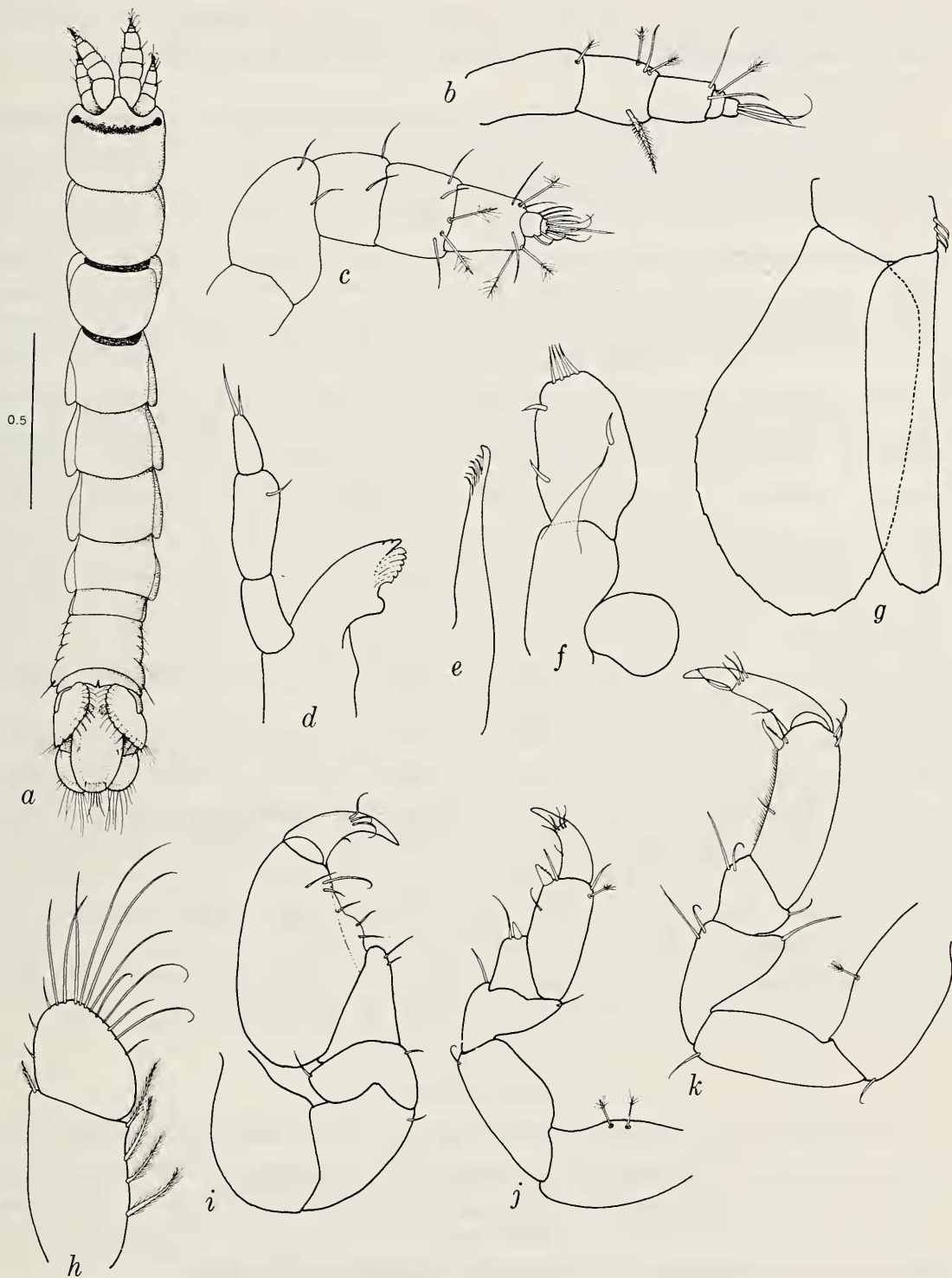


Fig. 5. *Sauranthura goldmanorum*: a, Paratype in dorsal view (scale in mm); b, Antenna 1; c, Antenna 2; d, Mandible; e, Maxilla; f, Maxilliped; g, Pleopod 1; h, Uropodal basis and endopod; i, Pereopod 1; j, Pereopod 2; k, Pereopod 6.

with middorsal slit in posterior margin. Telson elongate/ovate, distally broadly rounded, with 6 terminal setae, broad hyaline margin; 2 statocysts in proximal half.

Antennal peduncle with first article subequal in length to second and third articles together, 2 articles of flagellum very short, setose. Antenna 2 peduncle with 3 distal articles subequal in length; flagellum of 2 very short setose articles. Mandibular palp of 3 articles; middle article longer than first or third, last with 2 terminal setae; molar rounded, incisor of 3 blunt cusps; lamina dentata with 6 serrations. Maxilliped of 3 articles, 2 distal articles subequal in length; thin-walled, narrowly-tapering endite on inner surface. Pereopod 1 carpus distally rounded; propodus expanded, palm with thin hyaline margin bearing few short setae. Pereopods 2–6 essentially similar; carpus with anterior margin shorter than posterior; propodus becoming progressively more elongate posteriorly, bearing strong serrate spine postero-distally. Pleopod 1 exopod operculiform, slightly longer than and 3 times width of endopod; latter with 3 distal plumose setae. Uropodal exopod ovate, with scalloped hyaline margin bearing plumose setae and few simple setae, just reaching base of endopod; latter ovate, bearing several elongate simple setae.

Etymology.—The species is named for Barry and Lois Goldman of Lizard Island, Great Barrier Reef, Queensland.

Material.—Holotype: NMV J831, 1 non-ovigerous ♀ 2.0 mm; between Palfrey and South islands, off Lizard Island, 14°40'S, 145°28'E, Great Barrier Reef, from algal turf growing on large dead coral fragments, 3 m, coll. B. Kensley, 30 May 1980. Paratypes: NMV J832, J833 and J834 (slide), 4 non-ovigerous ♀, 1.9–2.2 mm, crest between Palfrey and South Island, off Lizard Island, 14°40'S, 145°28'E, Great Barrier Reef, coral rubble, 0.5 m, coll. B. Kensley, 31 May 1980. USNM 181714, 1 non-ovigerous ♀ 1.8 mm, lagoon between Palfrey and South islands, off Lizard Island Great Barrier Reef; *Acropora* coral rubble, 8–10 m, coll. B. Kensley, 28 May 1980.

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